

# The Myco101 Kit Instructions and Setup Manual

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## This kit includes:

- 1 - Grow Chamber with filter
- 1 – Water incubator with heater
- 12 – Pre-sterilized substrate Jars
- 1 - Quart perlite
- 1 – Analog thermometer

You may want to make sure you have some basic sterilization tools on hand such as sterile gloves, alcohol, dust masks and cotton balls.

When your box arrives you will notice three plastic chambers stacked onto one another. The chamber with the filter on it is your grow chamber and the other two are used for the water incubator. You should also have 2 lids, one for the grow chamber and one for the incubator.

After you have made sure you have all the parts and pieces of your kit it is a good idea to clean out the chambers with some warm, soapy water. You could also wipe it out with some household bleach/water solution (10% bleach and 90% water works great) to sterilize thoroughly. The chambers may have picked up some unwanted contaminants while in transit.

## INNOCULATION

The written instructions below are great but watching our videos would be much more beneficial to you in learning about this procedure.

<http://www.youtube.com/watch?v=r1vMaE7-mps> substrate jar inoculation

### Substrate Jars

In order for the mycelium to grow through the jar you have to introduce a mushroom culture to it via prepared spore syringe or culture syringe. Obviously a culture syringe would be better because there is already mycelium in it and there won't be a germination period as with spores. Oyster mushrooms work great in our jars along with Shiitake and any other grain-loving mushroom. **WARNING** Cultivating psilocybe mushroom species is illegal in the United States and is not encouraged or supported by our company or staff. Please do not ask us cultivation questions regarding psilocybe's.

Whatever you are injecting with, make sure it's sterilized using an alcohol soaked cotton ball, Bunsen burner, etc. There will be four holes in the lid of the jar. You will want to divide up 1 cc or ml (depending on syringe) per jar. That's 1/4 per hole. When you shoot inside the jar you will want to tilt the jar at an angle so that you can shoot in the middle where the substrate layer is. If you look closely at the jar you can see three distinct layers. You also want to press the tip of the needle against the glass so that it drips down a little. It is a little tedious but very effective. Some suggest placing tape over the holes in the lid after inoculation. We suggest leaving them open for the substrate to

breathe. Repeat this process making sure to wipe the needle with alcohol before and after each inoculation. It is vitally important that you do this step correctly. If you are interested in making sure you have a 100% sterile working environment then execute all of this work inside of a Glove Box.

## SETTING UP THE INCUBATOR

Place one of the incubator chambers on a flat surface in a place that will be fairly dark and fill about  $\frac{1}{4}$  of the chamber with water. Add 1 cap full of bleach to the water to prevent algae growth. Place the submersible aquarium heater in the water and turn the thermostat to around 85 degrees. NOTE: this heater is submersible. It can be completely underwater with the cord running out of the side. Do not drill any holes! Plug the heater into a wall socket and then place the second chamber inside of the chamber with water in it and close the lid. It will take an hour or so for the incubator to reach the proper temperature and depending on where you have placed the incubator and the ambient temperature around it, you may want to toggle the thermostat until you reach the desired incubation temperature of around 85 degrees. (Do not exceed 86 degrees inside the incubator) Use the digital thermometer provided to monitor the temperature inside the incubator.

Once the incubator is set up you can add as many substrate jars as you like inside. It will hold all twelve jars.

## INCUBATION

Depending on what strain you are growing the temperature inside your incubator will vary. Very little light is required for the incubation process and no humidity settings are required at this point. Please be mindful of letting the jars get too hot, they will dry out.

During the incubation process your spores will begin to germinate and eventually turn into mycelium, which is the vegetative part of a fungus, consisting of a mass of branching, threadlike hyphae. The mycelium will spread through the jar/rye bag over the course of a few days or a few weeks depending on what species you are working with.



*Troubleshooting -*

*If your jars have stopped growing for days at a time then you have what we like to call a*

*stalled jar. To remedy this - try turning the jar upside down inside your incubator to change the center of gravity and/or expose the jars to some indirect sunlight for 6 hours a day.*

*If your jar looks 100% except for a tiny bit on the underside of the glass or at the very top then proceed anyway. The brown uncolonized space you see is loose vermiculite used in the recipe and is not intended to colonize.*

*If you see pinheads forming inside of your jar while they are still incubating then it is definitely time to move to the next step. The pinning inside the jar just means that the mycelium network has grown to its full capacity and is ready to reproduce itself.*

*The incubation process is lengthy and can get a little arduous. Some jars may colonize before others. Use this to your advantage by fruiting these jars first while waiting on the others to finish incubating. No one says you have to grow all of the jars together. The most successful grow operations are always the ones that have a steady cycle of colonized jars ready for the grow chamber.*

## **DUNKING AND FRUITING**

The following set of instructions is for fruiting substrate jars after they have fully colonized. Please watch this video to get a more realized version of how to execute this important step.

<http://www.youtube.com/watch?v=MRG0Tz0AsLU> dunking and fruiting cakes

This is what a fully colonized cake should look like.



Dunking is best done under refrigeration, if possible. One can even dunk cakes that already have small pins safely. Just don't overdo it, by 48 hours underwater they will be dead. As for what kind of water to use, natural spring water is best but you can even use it straight from your faucet if need be. Temperature during the dunking should be cold, or as cool as possible and still above freezing. Time spent dunking should be not less than 6 hours for minimal benefits. 12 hours is about right for dunking in between flushes and at birth but 24 hours is the maximum for full rehydration of nearly spent cakes. There are at least 2 options for how to dunk. One method is to dunk each cake individually by placing it back in its original jar, filling with water, then screw on the lid to keep the cake submerged. This method works well for small batches and has the advantage of keeping each cake isolated so no contaminants are spread from cake to cake.

For larger batches, you can simply place several cakes in a large pan or bucket, cover with water and weigh the lid down with a brick or other heavy object.

#### Fruiting

Add all of the perlite to the grow chamber and enough water to where the perlite absorbs all of the water but there is very little standing water below the surface of the perlite. The perlite should be wet but firm enough to allow cakes to be set on the surface.

There are many methods used to fruit cakes and we will give you some of them here. The first is using the lids of the substrate jars you received with your kit. Remove the lids from your jars and clean them well with soapy water and some alcohol. Fill the lids with vermiculite, coco coir, etc, but not perlite! Add water to the vermiculite and let the water drip through the holes in the lid until no more comes out. You just want

the vermiculite to be nice and wet. Place the cake right on top as shown in the image above. Now these cakes are ready for the grow chamber.

Or you could simply place the cakes on a small square of tin foil on top of the perlite inside the fruiting chamber. Fruiting temperatures will vary but are usually going to be 75-79 degrees and the chamber should be kept as close to 100% humidity as possible. You will know when it is 100% b/c moisture will be constantly dripping down the walls of your chamber.

Once the cakes have flushed mushrooms you can pick them off and then dunk and fruit again and again until they lose all of their growing power. Expect three good flushes from each cake.